Meeting of the Decommissioning Community Workgroup (#11)
Tuesday, April 23, 2002
NASA Plum Brook Station (Decommissioning Team Conference Room Trailer)

The meeting began at 5:50 PM. Present were Workgroup members John Blakeman, Janet Bohne, Mark Bohne, Rick Graham, Bob Speers and Bill Walker. Also present were NASA Plum Brook Station retirees Jack Crooks, Len Homyak and Jim Martz and the following NASA personnel: Tim Polich, Decommissioning Project Manager; Keith Peecook, Senior Project Engineer and Sally Harrington, Public Affairs Specialist. Resident Manager Wes Watson; Cheryl Leeper, Environmental Engineer, Steve Neilsen and Scott Davidson of the US Army Corps of Engineers were also in attendance as were the following contractors: Marv Smith and Debbie Demaline of Indyne, Inc. and Susan Santos and Michael Morgan of FOCUS GROUP.

Tim began the meeting with welcoming remarks and the introduction of Decommissioning Team members. He emphasized that he was very happy to "finally have a chance" to hold the tour after last fall's security-related postponement. He also noted that the evening's Reactor Tour – being held in lieu of the regular quarterly meeting – will be the subject of an article in the July edition of the Decommissioning Project newsletter and part of the NASA historic documentation video being produced by Jim Polaczynski of Indyne. Keith Peecook followed with a brief overview of the Reactor Tour. He emphasized that he wanted Workgroup members to ask questions and then gave a brief overview of the tour route.

The tour began with a stop at the Access Control station, located just outside of the Reactor Facility. There, he explained that after signing in, visitors would pass through a portal monitor to ensure that they did not "carry in" any radiation and also be given a personal radiation monitoring device that would indicate any radiation exposure received during the tour. He noted that at the Access Control stop, visitors would read a "radiation work permit" apprising them that there is radiation inside the facility and the level of radiation associated with the type of work involved. In this case, members would not be going into any areas with radiation. Keith pointed out that because of the concrete composition of the Reactor Facility, there is a lot of radon. Because materials such as nylon and polyester attract radon; people might "set off" the radiation detectors upon leaving the facility because of radon. He suggested that tour members either refrain from wearing synthetic clothing into the facility or at least apply an anti-static spray made available to minimize the absorption of radon.

After getting access to the Reactor Facility, members were shown the following areas:

- Hot Cell gallery (including a peak into Cell #1 – the "hottest" cell) where loose equipment had been removed last summer
- Containment vessel
- Laboratories and Mass Spectrometer
- Reactor control room
- Fan house

- Waste handling facility
- Service equipment building (including electrical generators) which is also where the empty/clean B25 boxes are being stored; and finally, the
- Mock-up Reactor

Throughout the tour, Workgroup members asked a number of questions. Several Workgroup members asked about the schedule of work over the next several months. Keith noted that this summer, the crews would remove the 20-ton shrapnel shields, open the top of the vessel (via a 3-foot manhole) and take a sample of the contamination levels inside the vessel. He also said that once both loose and fixed equipment are removed (including the former plumbing system) it will be placed in appropriate shipping containers. These containers will then be moved to a safe area of the Reactor Facility for storage until they are transported next year to a licensed disposal facility.

Keith emphasized that prior to crews beginning work on the reactor tank, NASA will install a sophisticated ventilation system to maintain a negative pressure in the containment vessel to prevent the release of any airborne contamination. He said that once the piping systems are removed, the concrete in the vessel will be scabbled, and he noted that because the facility was so well constructed (with concrete covered by fiberglass which was then covered with an epoxy paint) that the contamination is "only one-half inch" deep on the concrete. Keith also said that early next year, subcontractor Wachs Technical Services will begin the 18-month task of segmentation (cutting up) the reactor tank. The segmented material will then be placed in cask liners, which will be, in turn, placed in casks for shipping.

After the tour, which lasted close to two hours, the group reconvened in the Conference Room Trailer, and Keith gave a presentation on environmental sampling around the Reactor Facility and Plum Brook Station. At the previous meeting, Workgroup member Rick Graham and others had requested that NASA make some of "the data" available to them which Keith said was the purpose of his presentation. He had prepared a summary of he results and also had a copy of the full results available for any member who wanted a copy.

Keith reviewed the overall sampling strategy that had previously been presented to Workgroup members. Specifically, in May 2001, NASA began an environmental sampling program for air, water and sediment, to establish a pre-decommissioning baseline. Keith said results to date have been "fairly consistent" and as expected have averaged well below the NRC regulatory limits. He explained that the NRC establishes an allowable limit for each individual isotope (such as cesium and strontium) that might be "released" during decommissioning. That level is set by the NRC so that <u>continuous</u> exposure to a member of the public would result in a total annual exposure of no more then 0.05 rem. Keith pointed out that the NRC limits are based on an annual average; i.e., they can be higher or lower then the limit as long as over the course of the year, your average does not exceed the limit. For the environmental sampling program, NASA identified the isotopes with the lowest limits and then set an "Action Level" at the NRC limit. If any of the monitoring results for gross alpha or gross beta were to exceed that

limit (at any one time), NASA would take steps to understand why; and NASA would examine site work activities that occurred at the time of the sampling to see what might have caused a high reading. For air action levels, NASA would check the results of local (job specific) monitoring and other perimeter air monitors. If necessary, Keith said samples may be sent to a lab to determine the specific isotopic makeup and how much is made up of the limiting isotope.

Keith noted that air monitoring at the Reactor Facility fence line takes place continuously, with filters collected and checked weekly. There is also a monitor located "downwind," by the Plum Brook front gate and one "upwind" about a mile apart from each other. Air samples are analyzed for gross alpha and beta on site and to date, all results of air monitoring are within background levels as expected.

Next, Keith discussed water and sediment sampling results. Water and sediment are sampled simultaneously at five locations both upstream and downstream of the facility. Groundwater is also sampled at two locations from two on-site deep wells. He said NASA is always looking for trends, noting that there is cause for concern "if we are trending upward, even if we're below the limits, we want to know why." He added that samples are being checked for "seasonal variation," considering airflow and temperature variations.

Water and sediment samples are collected on a monthly basis and are sent to GEL and analyzed for gross alpha and gross beta. Sediment is further analyzed for a suite of other isotopes as well. GEL is certified laboratory whose results are accepted by the Barnwell and Envirocare licensed disposal facilities, both of which NASA plans to use during Decommissioning. Keith pointed out the NRC does not have regulatory limits for sediment, explaining that the sediment is based on what's been in the water and explained that "what you're looking for in sediment is how something upstream (near the reactor operations) compares with something downstream." He said another consideration for sediment is how levels in the samples compare to background levels and to decommissioning-related cleanup levels, as well as to Derived Concentration Guide Levels (DCGL's) which he explained were site specific cleanup levels "back-calculated, using a computer model" that takes into account soil type, permeability of the soil, groundwater flow and the isotopes involved, among other factors. He noted that meeting DCG Levels (for Cesium 137 and Strontium 90) is one of the cleanup levels conditions for achieving the "resident farmer scenario" (no more than 25 millirems of radiation) required by the NRC at the end of the project.

He said sampling results have been consistent with background levels, but with some seasonal variation and added that sediment levels have consistently been below detection levels.

At the conclusion of Keith's presentation, Susan asked if NASA were providing "the right level of detail" for Workgroup members, and they agreed it was appropriate.

Susan noted that Janet had suggested a new candidate for the Workgroup, Lana Wood, a lifetime Monroeville farm resident who has a biology degree and works for a local veterinarian. Susan asked for the Workgroup's thoughts on her joining, and the members present agreed that NASA should invite her to join.

The meeting adjourned at 9:20 PM.